

**Table 024: Muons in Chromium**

Z	A [g/mol]	$\rho$ [g/cm <sup>3</sup> ]	I [eV]	a	$k = m_s$	$x_0$	$x_1$	$\bar{C}$	$\delta_0$
24 (Cr)	51.9961 (6)	7.180	257.0	0.15419	2.9896	0.0340	3.0451	4.1781	0.14
T	p [MeV/c]	Ionization	Brems	Pair prod [MeV cm <sup>2</sup> /g]	Photonucl	Total	CSDA range [g/cm <sup>2</sup> ]		
10.0 MeV	$4.704 \times 10^1$	5.542				5.542	$1.014 \times 10^0$		
14.0 MeV	$5.616 \times 10^1$	4.354				4.354	$1.836 \times 10^0$		
20.0 MeV	$6.802 \times 10^1$	3.422				3.422	$3.408 \times 10^0$		
30.0 MeV	$8.509 \times 10^1$	2.670				2.670	$6.761 \times 10^0$		
40.0 MeV	$1.003 \times 10^2$	2.287				2.287	$1.083 \times 10^1$		
80.0 MeV	$1.527 \times 10^2$	1.725				1.725	$3.160 \times 10^1$		
100. MeV	$1.764 \times 10^2$	1.623				1.623	$4.358 \times 10^1$		
140. MeV	$2.218 \times 10^2$	1.522				1.522	$6.914 \times 10^1$		
200. MeV	$2.868 \times 10^2$	1.469				1.469	$1.094 \times 10^2$		
273. MeV	$3.633 \times 10^2$	1.456			0.000	1.456	<i>Minimum ionization</i>		
300. MeV	$3.917 \times 10^2$	1.457			0.000	1.457	$1.779 \times 10^2$		
400. MeV	$4.945 \times 10^2$	1.471	0.000		0.000	1.472	$2.463 \times 10^2$		
800. MeV	$8.995 \times 10^2$	1.550	0.000		0.000	1.551	$5.109 \times 10^2$		
1.00 GeV	$1.101 \times 10^3$	1.583	0.001		0.000	1.584	$6.385 \times 10^2$		
1.40 GeV	$1.502 \times 10^3$	1.636	0.001	0.000	0.001	1.638	$8.866 \times 10^2$		
2.00 GeV	$2.103 \times 10^3$	1.693	0.002	0.001	0.001	1.697	$1.246 \times 10^3$		
3.00 GeV	$3.104 \times 10^3$	1.758	0.003	0.002	0.001	1.764	$1.823 \times 10^3$		
4.00 GeV	$4.104 \times 10^3$	1.803	0.004	0.003	0.002	1.812	$2.382 \times 10^3$		
8.00 GeV	$8.105 \times 10^3$	1.905	0.010	0.010	0.003	1.928	$4.514 \times 10^3$		
10.0 GeV	$1.011 \times 10^4$	1.936	0.013	0.013	0.004	1.967	$5.541 \times 10^3$		
14.0 GeV	$1.411 \times 10^4$	1.980	0.019	0.022	0.006	2.027	$7.543 \times 10^3$		
20.0 GeV	$2.011 \times 10^4$	2.024	0.030	0.035	0.008	2.098	$1.045 \times 10^4$		
30.0 GeV	$3.011 \times 10^4$	2.071	0.049	0.061	0.012	2.194	$1.511 \times 10^4$		
40.0 GeV	$4.011 \times 10^4$	2.102	0.070	0.090	0.016	2.278	$1.958 \times 10^4$		
80.0 GeV	$8.011 \times 10^4$	2.173	0.157	0.215	0.031	2.577	$3.606 \times 10^4$		
100. GeV	$1.001 \times 10^5$	2.195	0.204	0.282	0.039	2.720	$4.361 \times 10^4$		
140. GeV	$1.401 \times 10^5$	2.227	0.300	0.422	0.054	3.003	$5.760 \times 10^4$		
200. GeV	$2.001 \times 10^5$	2.261	0.449	0.644	0.076	3.431	$7.628 \times 10^4$		
300. GeV	$3.001 \times 10^5$	2.299	0.706	1.015	0.115	4.136	$1.028 \times 10^5$		
370. GeV	$3.706 \times 10^5$	2.319	0.892	1.286	0.141	4.639	<i>Muon critical energy</i>		
400. GeV	$4.001 \times 10^5$	2.326	0.971	1.401	0.153	4.852	$1.251 \times 10^5$		
800. GeV	$8.001 \times 10^5$	2.392	2.069	2.985	0.309	7.756	$1.897 \times 10^5$		
1.00 TeV	$1.000 \times 10^6$	2.414	2.634	3.797	0.388	9.234	$2.133 \times 10^5$		
1.40 TeV	$1.400 \times 10^6$	2.447	3.768	5.417	0.550	12.183	$2.510 \times 10^5$		
2.00 TeV	$2.000 \times 10^6$	2.482	5.505	7.893	0.795	16.677	$2.929 \times 10^5$		
3.00 TeV	$3.000 \times 10^6$	2.522	8.409	12.009	1.217	24.158	$3.425 \times 10^5$		
4.00 TeV	$4.000 \times 10^6$	2.551	11.355	16.171	1.646	31.723	$3.785 \times 10^5$		
8.00 TeV	$8.000 \times 10^6$	2.623	23.245	32.913	3.425	62.207	$4.669 \times 10^5$		
10.0 TeV	$1.000 \times 10^7$	2.646	29.243	41.333	4.340	77.563	$4.956 \times 10^5$		
14.0 TeV	$1.400 \times 10^7$	2.682	41.207	58.130	6.219	108.240	$5.391 \times 10^5$		
20.0 TeV	$2.000 \times 10^7$	2.721	59.272	83.442	9.102	154.538	$5.852 \times 10^5$		
30.0 TeV	$3.000 \times 10^7$	2.766	89.347	125.555	14.091	231.760	$6.377 \times 10^5$		
40.0 TeV	$4.000 \times 10^7$	2.798	119.546	167.777	19.203	309.324	$6.749 \times 10^5$		
80.0 TeV	$8.000 \times 10^7$	2.878	240.561	336.801	40.578	620.818	$7.644 \times 10^5$		
100. TeV	$1.000 \times 10^8$	2.904	301.190	421.400	51.630	777.125	$7.931 \times 10^5$		